

## MSD Project Hazard Guide

This guide should be consulted to determine the Procedures, Permits, Authorizations, and/or Approvals Required for new and ongoing projects

Project Name \_\_\_\_\_  
 Project Location(s) \_\_\_\_\_  
 PI Name \_\_\_\_\_

<b>Topic, Agent, or Hazard</b>	<b>Procedures, Permits, Authorizations, and/or Approvals Required</b>	<b>Berkeley Lab Publication 3000 (<a href="http://ehs.lbl.gov/ehsdiv/pub3000/pub3000c.html">ehs.lbl.gov/ehsdiv/pub3000/pub3000c.html</a>) Section Number or Other Reference</b>
R&D Electrical Work	Supervisory authorization required for work on electrical equipment, including repairing, constructing, testing, and troubleshooting electronic and electrical apparatus	Sec. 8.5
Health Hazard Gas	AHD required for NFPA Health Hazard Gas Class 3 or 4, or Class 2 with poor warning properties (e.g. Ammonia, Arsine, see table: Chapt 13, App B)	Sec. 13.4.2
Flammable Gas	AHD required for quantities greater than 400 cubic feet (i.e. more than 2 standard cylinders-hydrogen, methane, etc.).	Sec. 13.4.2
Pyrophoric Gas	AHD and Safety Note or manufacturer's documentation required (e.g. silane, phosphine)	Sec. 13.4.2

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a. Pressure Systems Greater Than 150 psi (downstream from the regulator). b. Pressure Systems Less Than 150 psi (downstream from the regulator) which contain a pressure vessel in the system (not including the DOT cylinder). The vessel must contain stored energy. c. Liquid Pressures > 1,500 psig d. Stored Energy >75,000 ft-lb	Safety Note or manufacturer's documentation required.	Sec. 7.6.1
Pressure Systems Containing Radionuclides	RWA required and Safety Note or manufacturer's documentation	Sec. 7.6.1; 21.4.1
Confined or Oxygen Deficient Space	Confined Spaces are included in the Confined Space Program and entered with procedures or permits. AHD for other non-confined spaces with potential for oxygen deficiency or life-threatening contaminants.	Sec. 13.4.2
Uniquely Unstable, Reactive, or Toxic Chemicals	Supervisor and EH&S evaluation required. AHD requirement determined by EH&S based on risk. (e.g. lithium, sodium)	CHSP Sec. C.3, p C-4
Biohazard	Level 1: Berkeley Lab Institutional Biosafety Committee Notification. Level 2: Berkeley Lab Institutional Biosafety Committee authorization Level 3 & 4: Not permitted	Sec. 4.7
Hoods and Exhausted Enclosures	Hoods and enclosures must pass the EH&S hood survey conducted at least every two years as indicated by hood survey sticker and no posted deficiency tags. New hoods and enclosures must meet performance standards and EH&S approval.	Sec. 4.6.1

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Respirator	Respirator wearer must have medical approval from EH&S Health Services and respirator fit test from EH&S Field Support.	Sec. 4.12
Noise Greater than 85 decibels (dBA)	Noise evaluation by EH&S and audiogram by EH&S Health Services	Sec. 4.5
Laser	AHD required for Class 3b & 4 lasers	Sec. 16.20
X-ray Machine	X-ray Machine Safety Document required	Sec. 21.12.1
Lifting Devices (e.g. screw pin shackles, hoist rings) and Fixtures (e.g. spreader bars, special slings)	Inspection by NDT Laboratory required	Sec. 5.4.9.1
Lifting Accessories (cranes, hoists and accessories)	Inspection by operator and Inspection by Facilities	Sec. 5.4.7.5
Radionuclide Work	RWA required	Sec. 21.4.1
Sealed Sources (Radioactive)	SSA required	Sec. 21.10.12
Welding, Soldering and Torch Work	Fire Department Permit required	Sec. 12.11; Contact MSD Safety Coordinator or the EH&S Division Liaison
Other Hazards (e.g. seismic, human subjects, animal subjects, radioactive drugs, etc.)		Contact MSD Safety Coordinator Or the EH&S Division Liaison